

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1-19. (Canceled)

20. (Currently Amended) A composition for ion channel transfer which comprises a mesenchymal stem cells cell incorporated with a compound nucleic acid which encodes a hyperpolarization activated, cyclic nucleotide gated 2 (HCN2) ion channel in an amount sufficient effective to create an ion channels channel in the cell.

21-48. (Canceled)

49. (Currently Amended) A method of expressing a functional ion channel in a syncytial structure comprising: (1) preparing the composition of claim 20; and (2) administering the composition ~~of claim 20~~ to the syncytial structure.

50. (Currently Amended) The syncytial structure method of claim 49, wherein the syncytial structure is a mammalian heart.

51. (Currently Amended) A method of treating a cardiac condition rhythm disorder in a subject which comprises contacting a cell of the heart of the subject with the composition of claim 20 in an amount sufficient effective to increase the pacemaker current expression of the cell, thereby treating the condition rhythm disorder in the subject.

52-53. (Canceled)

54. (Currently Amended) The method of claim 51, wherein the cardiac rhythm disorder is ~~selected from a group consisting of~~ at least one of conduction block, complete atrioventricular block, incomplete atrioventricular block ~~and~~ or sinus node

dysfunction.

55. (Currently Amended) The method of claim 51, wherein the ~~step of~~ contacting is selected from the group consisting of effected by systemic administration to ~~the a~~ syncytial structure and or injection.
56. (Currently Amended) The method of claim 55, wherein the ~~step of~~ administration ~~of~~ the contacting is selected from the group comprising is effected by topical application to the cells of the structure, microinjection and or catheterization.
57. (Currently Amended) A method of inducing a pacemaker current in ~~the a~~ subject's heart ~~in-a-subject~~ which comprises contacting a cell of the heart ~~of a~~ subject with the composition of claim 20 in ~~a~~ sufficient an amount effective to induce a pacemaker current in the cell of the heart ~~of a~~ subject, thereby inducing a pacemaker current in the ~~cell of the heart of the subject~~.
58. (Canceled)
59. (Currently Amended) A method of inducing a pacemaker current in a cell which comprises contacting a ~~the~~ cell with the composition of claim 20 in ~~a~~ sufficient an amount effective to induce a pacemaker current in the cell, thereby inducing a pacemaker current in the cell.

60-64. (Canceled)